

ANDROMEDA POLIFOLIA AND *A. GLAUCOPHYLLA*.

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THE attractive Bog Rosemary of our American swamps and wet shores is familiar to all northern botanists as *Andromeda Polifolia*. Under this name alone it has passed for more than half a century, its supposed range including all boreal America, Europe and Asia; and one observer of more than ordinary keenness has even ventured the statement that "this species, although so widely distributed, retains its form without variation in all latitudes"¹ from southern Canada to the Arctic Sea. Yet if we examine the material which is passing in America as *Andromeda Polifolia* we shall find that in general the plant of temperate bogs—from central Labrador to Pennsylvania, Minnesota and Lake Winnipeg—differs in nearly every feature from the plant of arctic Europe, Asia, and America (northern Labrador to Alaska).

True *Andromeda Polifolia*, described by Linnaeus as growing "*in Europae frigidioris paludibus turfosis*" and now known to extend across northern Asia and Arctic America, in general resembles the common shrub of New England and Canadian bogs, and it is not surprising that the two should have been confused. *A. Polifolia* has the leaves covered beneath, at least when young, with a glaucous bloom, which, however, may be quite deciduous in the older leaves; its young shoots are green and not glaucous; its scaly terminal buds are brownish but rarely glaucous, and from them arise the few flowers nodding singly at the tips of slender nearly straight pedicels often three or four times their length; the calyx-lobes are either pale or red-tinged; and the brown or reddish capsule is subglobose or obovoid, usually higher than broad. This plant, found ordinarily in the arctic regions, extends south in Europe to the Venetian Alps, in eastern Asia to Japan, and in America to Sitka, Lake Huron, and possibly to the mountains of New York.

The commoner plant of eastern America—from latitude 55° in Labrador to Lake Winnipeg, Minnesota and Pennsylvania—resembles *A. Polifolia* in foliage, but the under surface of the leaf, instead of bearing a deciduous paint-like glaucous coat, is tomentulose or

¹ Macoun, Cat. Can. Pl. i. 297.

pulverulent with fine white hairs; the young branches and the scaly buds are conspicuously glaucous; the flowers are borne on thicker curving pedicels as long or barely twice as long as the corolla; the calyx-lobes are whitish; and the very glaucous almost baccate capsule is depressed and turban-shaped, much broader than high.

Although these important differences between the Eurasian *Andromeda Polifolia* and its commoner American representative have so long been quite overlooked by American botanists, they were not unnoticed by early students of our flora. To Linnaeus, apparently, the American plant was quite unknown, and his *A. Polifolia*, based entirely upon European descriptions and specimens, is fortunately freed from any possible confusion with our plant.

The first botanist to distinguish our common species was apparently L'Heritier de Brutelle who seems to have characterized and illustrated as "*Andromeda Polifolia latifolia*" the American plant. The special volume in which L'Heritier discussed this plant was never published though the manuscript and plate were undoubtedly seen by Aiton, who in 1789 took up and described the plant under L'Heritier's name. Aiton treated *Andromeda Polifolia* as embracing three varieties as follows:¹

Polifolia. 3. A pedunculis aggregatis, corollis ovatis, foliis alternis lanceolatis revolutis. *Sp. pl.* 564.

latifolia. α foliis oblongis, corollis ovatis incarnatis, laciniis calycinis patentibus ovatis albis: interdum apice rubicundis.

Andromeda polifolia latifolia. *L'Herit. stirp. nov. tom. 2. tab. 11.*

Broad-leav'd Marsh Andromeda.

media. β foliis lanceolatis, corollis oblongo-ovatis, rubicundis, laciniis calycinis magis erectis.

Common Marsh Andromeda, or Wild Rosemary.

angustifolia. γ foliis lanceolato-linearibus, laciniis calycinis oblongis rubris.

Narrow-leav'd Marsh Andromeda.

Nat. α. of North America; β. of Britain; and γ. of Newfoundland and Labrador.

Fl. May — September.

H. h.

Aiton's variety α , *latifolia*, from North America, with spreading white calyx-lobes is undoubtedly the common plant of our northern bogs; his var. β , *media*, is the common *A. Polifolia* of northern Europe; but his var. γ , *angustifolia*, from Newfoundland and Labrador, is slightly problematic. The character "laciniis calycinis oblongis rubris" agrees well with a dwarf form of the true *A. Polifolia* known from Hebron, Labrador, from Lake Huron, and from the Mackenzie District and Alaska; but so far as known to the writer all the material from Newfoundland is the common American plant with white or whitish calyx-lobes.

The next treatment of the species of special interest was that of Pursh in 1814. Pursh closely followed Aiton in distinguishing two American varieties of *Andromeda Polifolia*, α , *angustifolia*, Ait., and β , *latifolia*, Ait., adding: "I strongly suspect the variety α . to be a distinct species, which might be called *A. rosmarinifolia*."¹ This narrow-leaved form with red calyx-lobes, as already stated, is known not only from Labrador, but from Lake Huron, Mackenzie and Alaska, and in the Old World it seems to be not infrequent. In fact, from the ordinary form of *A. Polifolia*, it differs only in its narrower more revolute leaves. In the common American plant which has ordinarily passed with us as *A. Polifolia*, both narrowly linear strongly revolute and oblong essentially flat leaves are often found on the same plant, as already noted by Macoun, who says "Young and late shoots have wider leaves than the normal form."² Similarly in 1778 Pallas, whose beautiful plate shows clearly the different phases of the Old World plant, after describing the common narrow-leaved form shown in his figures A and B, added to the characterization "imo interdum latifolius (fig. D)"³ — a figure of a sterile shoot which closely simulates the broad-leaved young branches of the American plant. Thus it is evident that the breadth of leaf in true *A. Polifolia* as well as in its common American representative is largely due to the stage of development and is of no value as a diagnostic character.

In 1821 the common American plant was described by Link as a species distinct from the European *Andromeda Polifolia*, a course which, as shown by Link's description and notes, was based upon a

¹ Pursh, Fl. 291.

² Macoun, Cat. Can. Pl. i. 297.

³ Pallas, Fl. Ross. i. pt. 2, 53, t. 71.

more discriminating study than the plant has since been accorded. Link's description was as follows: "*A. glaucophylla*. Foliis lineari-bus margine revolutis subtus albidis, floribus aggregatis terminalibus, pedunculis corolla ovata parum majoribus, antheris versus apicem aristatis. *A. polifolia* β . Pursh *am.* i. 291. Differt a praecedente cui similis pedunculorum magnitudine, qui in illa duplo longiores corolla et ultra. Folia subtus alba nec tomentosa. Glandulae inter stamina."¹

Thus Link knew and pointed out most of the prominent features which separate the characteristic *Andromedas* of the two continents. Yet little attention seems to have been given to his work, although in 1834 George Don, who divided the aggregate *A. Polifolia* into many formal varieties, gave it partial recognition by attempting to keep Link's species as a variety apart from *A. Polifolia*, var. *latifolia*, Ait. Don was followed in this treatment by DeCandolle, but later authors have very generally treated the common American and

European plants as one. That the two are clearly distinct species is sufficiently apparent from the foregoing discussion of the plants whose main characters are again briefly stated, and whose fruiting tips are shown in the figures kindly prepared by Mr. F. Schuyler Mathews.



Fig. 1

ANDROMEDA POLIFOLIA, L. (Fig. 1). Low shrub with elongate creeping base; stem simple or with ascending branches, 0.5 to 3 dm. high: leaves coriaceous, linear to narrowly oblong, entire, either flat or strongly revolute, glabrous, at first generally whitened beneath with a paint-like coat, later often quite green: young branches and bud-scales usually not glaucous: pedicels filiform, straightish, 2 to 4 times exceeding the nodding flower and erect fruit: corolla globose-urceolate: calyx with pale or usually reddish slightly ascending lobes: capsule brown or reddish, obovoid or subglobose, as high as broad.—*Sp.* 393 (1753), & *Fl. Lap.* 131, t. 1, fig. 2; *Oeder, Fl. Dan.* i. 11, t. 54; *Pallas, Fl. Ross.* i. pt. 2, 53, t. 71; *Hook. Fl. Bor.-Am.* ii. 38, in part; *Reich. Ic. Fl. Germ.* xvii. 80, t. 110, fig. 1; *Thomé, Fl. Deutschl.* iv. 4, t. 463. Var. *media*, Ait. *Hort. Kew.* ii. 68 (1789); *G. Don, Gen. Syst.*

¹ Link, *Enum.* i. 394.

iii. 829; DC. Prodr. vii. 607. Var. *angustifolia*, Ait. Hort. Kew. ii. 68 (1789); Pursh, Fl. 291. Vars. *subulata*, *minima*, and *oleifolia*, G. Don, l. c. (1834). *A. rosmarinifolia*, Pursh, Fl. 291 (1814); G. Don, l. c. *A. Polifolia*, var. *rosmarinifolia*, DC. l. c. *Rhododendron Polifolium*, Scop. Fl. Carn. ed. 2, i. 287 (1772).—Arctic regions, extending south in Europe to Great Britain, and in the mountains to northern Italy; in Asia to Japan, &c.; and in America to Sitka (various collectors); Lake Huron (*Todd*), and “mountains, New York” (*Durand* in Herb. Thurber). Very local in temperate America, but to be expected on the mountains of northern New England.

A. GLAUCOPHYLLA, Link. (Fig. 2). Similar in habit: leaves white beneath with close fine pubescence: branchlets and bud-scales glaucous: flowers on thickish curved pedicels rarely twice as long as the urceolate corolla: calyx-lobes whitish, usually spreading: capsule depressed, turban-shaped, glaucous.—Enum. Hort. Berol. i. 394 (1821). *A. Polifolia* of Am. authors in general. *A. Polifolia*, var. *latifolia*, Ait. Hort. Kew. ii. 68 (1789); Pursh, Fl. 291; Lodd. Bot. Cab. vi. no. 546; G. Don, l. c.; DC. l. c. *A. Polifolia*, var. *angustifolia*, Lodd. l. c. xvi. no. 1591 (1829), not Ait., and var. *revoluta* Lodd. l. c. xviii.



Fig. 2

no. 1725 (1831). [Loddiges ascribes the plants from which his plates were drawn to northern Europe, but probably they originated in America and later in cultivation were supposed to be European.] *A. Polifolia*, var. *glaucophylla*, G. Don, Gen. Syst. iii. 829 (1834); DC. l. c. *A. americana*, Hort., and *A. canadensis*, Hort. acc. to DC. l. c. (1839).—In sphagnum swamps and wet mossy shores and banks, from Aillik Bay (lat. 55°), Labrador to Lake Winnipeg, south to Minnesota, Pennsylvania and northern New Jersey.

GRAY HERBARIUM.

RECORDS OF SOME PLANTS NEW TO MAINE.—On July 13th, 1902, while I was collecting along the water front below Bangor in company with Mr. F. M. Billings, we found a number of specimens of vetch-like leguminous plants growing in the gravelly ballast, which had been left there by some Italian vessels. Not being able to identify